PREVENTION OF SIGNIFICANT DETERIORATION PERMIT PROPOSED PURSUANT TO THE REQUIREMENTS AT 40 CFR § 52.21

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION IX

PSD PERMIT NUMBER: SAC 12-01

PERMITTEE: Sierra Pacific Industries
P.O. Box 496028
Redding, CA 96049-6028

FACILITY NAME: Sierra Pacific Industries- Anderson

FACILITY LOCATION: 19758 Riverside Avenue
Anderson, California 96007

Pursuant to the provisions of the Clean Air Act (CAA), Subchapter I, Part C (42 U.S.C. Section 7470, *et. seq.*), and the Code of Federal Regulations (CFR) Title 40, Section 52.21, the United States Environmental Protection Agency Region 9 (EPA) is issuing a *Prevention of Significant Deterioration* (PSD) air quality permit to Sierra Pacific Industries (SPI). This Permit applies to the approval to construct and operate a new stoker boiler capable of generating 31 MW of gross electrical output from the combustion of clean cellulosic biomass, and related auxiliary equipment.

SPI is authorized to construct and operate the 31 MW cogeneration unit at SPI-Anderson as described herein, in accordance with the permit application (and plans submitted with the permit application), the federal PSD regulations at 40 CFR § 52.21, and other terms and conditions set forth in this PSD Permit. Failure to comply with any condition or term set forth in this PSD Permit may be subject to enforcement action pursuant to Section 113 of the Clean Air Act. This PSD Permit does not relieve SPI from the obligation to comply with applicable federal, state, and Shasta County Air Quality Management District (District) air pollution control rules and regulations.

Per 40 CFR § 124.15(b), this PSD Permit becomes effective 30 days after the service of notice of this final permit decision unless review is requested on the permit pursuant to 40 CFR § 124.19.

Deborah Jordan
Director, Air Division

2-19-2013
Date

SIERRA PACIFIC INDUSTRIES - ANDERSON (SAC 12-01)
PREVENTION OF SIGNIFICANT DETERIORATION PERMIT
PERMIT CONDITIONS

PROJECT DESCRIPTION

Sierra Pacific Industries, Inc. (SPI) applied for the approval to construct and operate a new stoker boiler capable of generating 31 MW of gross electrical output from the combustion of biomass and natural gas, and related auxiliary equipment. The original Prevention of Significant Deterioration (PSD) permit for this lumber manufacturing facility was issued in 1994 by the Shasta County Air Quality Management District (District). The site currently contains a wood-fired boiler cogeneration unit with associated air pollution control equipment and conveyance systems that produce steam to dry lumber in existing kilns. On March 3, 2003, USEPA revoked and rescinded the District's authority to issue and modify federal PSD permits for new and modified major sources of attainment pollutants in Shasta County. Therefore, EPA is issuing this PSD permit to authorize SPI to construct and operate the additional boiler and related auxiliary equipment described in this permit at the SPI-Anderson facility. The PSD permit previously issued by the District to SPI is still in effect and applies to existing equipment at the SPI-Anderson site.

Fuel for the new stoker boiler will be generated on site and received from other fuel sources, mainly other SPI facilities, to produce roughly 250,000 pounds per hour of steam. This steam will be used to dry lumber in existing kilns for the lumber operation, as well as feed a turbine that will drive a generator to produce electricity for use on site or for sale to the grid. A closed-loop three-cell cooling tower will be used to dispose of waste heat from the steam turbine.

This PSD permit for the modification requires the use of Best Available Control Technology (BACT) to limit emissions of nitrogen oxides (NO_x), carbon monoxide (CO), total particulate matter (PM), PM under 10 micrometers (μm) in diameter (PM_{10}) and PM under 2.5μm in diameter ($PM_{2.5}$) to the greatest extent feasible. Air pollution emissions from the modification will not cause or contribute to violations of any National Ambient Air Quality Standards (NAAQS) or any applicable PSD increments for the pollutants regulated under the permit.

Additional equipment includes the construction of an additional cooling tower and an emergency natural gas engine to power the emergency boiler recirculation pump.

EQUIPMENT LIST

Table 1 lists the new equipment that will be regulated by the proposed PSD permit:

Table 1: New Equipment List Regulated by the PSD Permit

ID	Unit	Description
U1	One Stoker Boiler with Grate	• Biomass-fired with natural gas burners for start-up • Maximum annual average heat input of approximately 468 MMBtu/hr and steam generation rate of 250,000 lbs/hr • Equipped with two natural gas burners, each with a maximum rated heat input of 62.5 MMBtu/hr • Equipped with selective non-catalytic reduction (SNCR) system to reduce NO_x, and multiclone with an electrostatic precipitator (ESP) to control PM emissions
U2	Cooling Tower	• Composed of three cells with an expected water load of 4.24 gallons per minute per square foot.
U3	Emergency Engine	• 256hp at 1,800 rpm • Spark-ignition internal combustion, natural gas-fired • Powers emergency boiler recirculation pump • 40 CFR Part 60- Subpart JJJJ Compliant

Table 2 lists the existing equipment that is not included in this PSD permit. The equipment listed below is permitted by the District and the Permittee must comply with all applicable requirements. *Table 2* is provided for reference purposes only:

Table 2: Existing Equipment List

ID	Unit	Description
U4	One Wellons Stoker Boiler	• Biomass-fired with natural gas burners for start-up • Maximum annual average heat input of approximately 116.4 MMBtu/hr • Equipped with SNCR system to reduce NO_x, and multiclone with ESP to control PM emissions • Equipped with one 30,400 ft^3, 2 hog fuel bins, 2 wood chip fuel bins
U5	One Conveyance System	• 2 Cyclones with combined flow rate of 51.004 scfm • 1 7,118 ft^2 MAC Pulse Jet Baghouse with 300hp Blower • 1 35" x 45" Rotary Airlock • 1 Buhler en-masse, 19", 22tph Conveyor • 2 Each overhead storage bins with enclosed sides
U6	One Spray Unit	• Closed loop unit equipped with integrated, negative pressure, mist collection system and 65' exhaust stack
U7	One Wood Chip Loading Facility	• 1 Platform truck dumper • 1 Wood chip conveying system with dust containment hood • 1 200hp, 59,000CFM Rader blower
U8	Seven De-greasing Tanks	• Non-solvent based
U9	One Gas Storage Tank	• Above ground with 10,000 gallon capacity
U10	One Painting Operation	

PERMIT CONDITIONS

I. PERMIT EXPIRATION

As provided in 40 CFR § 52.21(r), this PSD permit shall become invalid if construction:

A. is not commenced (as defined in 40 CFR § 52.21(b)(9)) within 18 months after the approval takes effect; or

B. is discontinued for a period of 18 months or more; or

C. is not completed within a reasonable time.

II. PERMIT NOTIFICATION REQUIREMENTS

Permittee shall notify EPA Region IX by letter or by electronic mail of the:

A. date construction is commenced, postmarked within 30 days of such date;

B. actual date of initial startup, as defined in 40 CFR § 60.2, postmarked within 15 days of such date;

C. date upon which initial performance tests will commence, in accordance with the provisions of *Conditions X.H and I*, postmarked not less than 30 days prior to such date. Notification may be provided with the submittal of the performance test protocol required pursuant to *Conditions X.H and I*; and

D. date upon which initial performance evaluation of the continuous emissions monitoring system (CEMS) will commence in accordance with 40 CFR § 60.13(c), postmarked not less than 30 days prior to such date. Notification may be provided with the submittal of the CEMS performance test protocol required pursuant to *Condition X.I.*

III. FACILITY OPERATION

A. At all times, including periods of startup, shutdown, shakedown, and malfunction, Permittee shall, to the extent practicable, maintain and operate the Facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to EPA, which may include, but is not limited to, monitoring results, opacity observations, review of operating maintenance procedures and inspection of the Facility.

B. The Permittee shall operate and maintain U1, U2 and U3 in a manner consistent with good engineering practices for its full utilization.

C. As soon as practicable following initial startup of the facility (as defined in 40 CFR § 60.2) but prior to commencement of commercial operation (as defined in 40 CFR § 72.2), and thereafter, the Permittee shall develop and implement an operation and maintenance plan for U1, U2 and U3. At a minimum, the plan shall identify measures for assessing the performance of U1, U2, and U3, the acceptable range of performance measures for achieving the desired output, the methods for monitoring the performance measures, and the routine procedures for maintaining U1, U2 and U3 in good operating condition.

IV. MALFUNCTION REPORTING

A. Permittee shall notify EPA at R9.AEO@epa.gov within two (2) working days following the discovery of any failure of air pollution control equipment or process equipment, or failure of a process to operate in a normal manner, which results in an increase in emissions above the allowable emission limits stated in *Section X* of this permit.

B. In addition, Permittee shall provide an additional notification to EPA in writing or electronic mail within fifteen (15) days of any such failure described under *Condition IV.A*. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial malfunction, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed in *Section X*, and the methods utilized to mitigate emissions and restore normal operations.

C. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violation of this permit or any law or regulation such malfunction may cause.

V. RIGHT OF ENTRY

The EPA Regional Administrator, and/or an authorized representative, upon the presentation of credentials, shall be permitted:

A. to enter the premises where the Facility is located or where any records are required to be kept under the terms and conditions of this PSD Permit;

B. during normal business hours, to have access to and to copy any records required to be kept under the terms and conditions of this PSD Permit;

C. to inspect any equipment, operation, or method subject to requirements in this PSD Permit; and

D. to sample materials and emissions from the source(s).

VI. TRANSFER OF OWNERSHIP

In the event of any changes in control or ownership of the Facility, this PSD Permit shall be binding on all subsequent owners and operators. Within 14 days of any such change in control or ownership, Permittee shall notify the succeeding owner and operator of the existence of this PSD Permit and its conditions by letter. Permittee shall send a copy of this letter to EPA Region IX within 30 days of its issuance.

VII. SEVERABILITY

The provisions of this PSD Permit are severable, and, if any provision of the PSD Permit is held invalid, the remainder of this PSD Permit shall not be affected.

VIII. ADHERENCE TO APPLICATION AND COMPLIANCE WITH OTHER

ENVIRONMENTAL LAWS

Permittee shall construct the Project in compliance with this PSD permit, the application on which this permit is based, and all other applicable federal, state, and local air quality regulations. This PSD permit does not release the Permittee from any liability for compliance with other applicable federal, state and local environmental laws and regulations, including the Clean Air Act.

IX. RESERVED

X. SPECIAL CONDITIONS

A. Boiler Annual Emission Limits

Annual emissions, in tons per year (tpy) on a 12-month rolling average basis, shall not exceed the following:

Table 3- U1 Rolling 12-Month Emission Limits

ID	NO_x	CO	PM	PM_{10}	$PM_{2.5}$
U1	267	472	41	41	41

B. Air Pollution Control Equipment and Operation

As soon as practicable following initial startup of U1 (startup as defined in 40 CFR § 60.2) but prior to commencement of commercial operation (as defined in 40 CFR § 72.2), and thereafter, Permittee shall continuously operate, and maintain the following during boiler operations: an SNCR system for control of NO_x, multiclone collectors and an ESP for the control of PM, PM_{10} and $PM_{2.5}$, and good combustion practices for the control of CO. Permittee shall also perform any necessary operations to minimize emissions so that emissions are at or below the emission limits specified in this permit.

Permittee shall also to the extent practicable, maintain and operate equipment in a manner consistent with good air pollution control practice for minimizing emissions.

C. Steam Production and Emission Limitations

1. Except as noted below under *Condition X.D.*, on and after the date of initial startup, Permittee shall not discharge or cause the discharge from U1 into the atmosphere in excess of the following:

Table 4- U1 Short-Term Emission Limits

	U1
NO_x	• 70.2 lbs/hr (3-hour block average) • 0.13 lbs/MMBtu (12-month rolling basis) • 0.15 lbs/ MMBtu (3-hour block average) • EPA Method 1-4 and 7
CO	• 107.7 lbs/hr (3-hour block average) • 0.23 lb/MMBtu (3-hour block average) • EPA Method 1-4 and 10
PM, PM_{10}, $PM_{2.5}$	• 0.02 lb/MMBtu (3-hour block average) • 9.4 lbs/hr (hourly average)

2. CO emissions at all times from U1, including startup and shutdown events as defined *Conditions X.D.3. and X.D.4.*, shall not exceed 432 lbs/hr (hourly average).

3. Steam production from U1 shall not exceed 275,000 lbs/hr (24 hour block average).

4. Visible emissions from U1, except for uncombined water vapor or during periods defined in *Condition X.D.*, shall not exceed 20% opacity in any six minute period, as verified by the continuous opacity monitoring system (COMS).

5. Visible emissions from the U1 shall not exceed 40% opacity for more than three minutes out of any one 60-minute period.

6. At all times, including equipment startup and shutdown, Permittee shall minimize the cause or discharge of the following emissions:
   a. dust from unpaved roads or any other non-vegetation-covered area;
   b. fugitive sawdust from fuel-handling devices and/or storage areas.
   c. char and/or bottom ash which is processed by the char handling systems or removed from U1 by other means.
   d. accumulation of sawdust or ash on outside surfaces including, but not limited to, the main building, U1, ESP, support pads, road areas. Surfaces shall be cleaned on a regular basis to prevent the build-up of ash and/or fugitive dust.
   e. fuel dust or ash spilled due to an upset condition shall be cleaned up in a timely manner. In no event shall spilled dust or ash be allowed to exist beyond 24 hours of the upset.

D. Requirements during Startup and Shutdown

1. Only biomass fuels, as defined in *Condition X.G.1*, and Public Utilities Commission (PUC)-quality pipeline natural gas shall be fired during startup and shutdown

2. For U1, normal operating temperature shall be defined as the normal operating temperature specified by the unit manufacturer.

3. For U1, startup shall be defined as the period beginning with U1 not in operation and concluding when U1 has reached a normal operating temperature. During startup, the generator shall be separated from the electrical grid.

4. For U1, shutdown shall be defined as the period beginning with curtailment of fuel feed and concluding when the recorded superheater outlet temperature reaches 150°F and remains so for at least one hour. During shutdown, the generator shall be separated from the electrical grid.

5. For U1, the duration of startup and shutdown periods and emissions of NO_x, CO, PM, PM_{10} and $PM_{2.5}$ shall not exceed the following, as verified by the CEMS and fuel usage data:

Table 5- U1 Startup and Shutdown Limits

	NO_x (8 hour average)	CO (8 hour average)	PM, PM_{10}, $PM_{2.5}$ (24 hour average)	Duration
Startup	70.2 lb/hr	108 lb/hr	8.93 lb/hr	24 hours
Shutdown	70.2 lb/hr	108 lb/hr	8.93 lb/hr	24 hours

6. For U1, the Permittee must operate the CEMS during startup and shutdown periods.

7. For U1, the Permittee must record the time, date, and duration of each startup and shutdown event.

8. For U1, the Permittee must keep records that include calculations of NO_x, CO, PM, PM_{10}, $PM_{2.5}$ and emissions in lb/hr and lb/MMBtu during each startup and shutdown event based on the CEMS and fuel usage data.

E. Auxiliary Equipment Emissions Limitations

1. Permittee shall not discharge or cause the discharge from each unit into the atmosphere in excess of the following:

Table 6- U2 and U3 Emission Limits

	U2	U3
NO_x		• 0.78 lb/hr
CO		• 4.0 g/hp-hr (3-hour block average) • 6.11 lb/hr
PM/ PM_{10}	• 0.272 lbs/hr (hourly average)	• 0.0216 lb/hr

2. Except during an emergency, U3 shall be limited to operation for maintenance and testing purposes. Annual hours of operation for U3, for maintenance and testing, shall not exceed 100 hours per 12-month rolling average.

F. Operating Conditions and Work Practices

1. *Low SNCR activation temperature* shall be defined as the lowest operating temperature for U1 at which the SNCR system is recommended for operation to reduce NO_x emissions as defined by the SNCR manufacturer. This temperature value shall be included in the operation and maintenance plan required by *Condition III.C.*

2. For U1, SNCR systems for the control of NO_x shall be in operation at all times that U1 exceeds the *low SNCR activation temperature*.

3. For U1, the multiclones and ESP for the control of PM, PM_{10} and $PM_{2.5}$ shall be in operation at all times during the combustion process.

4. U3 shall not operate during startup of U1, except when required for emergency operations.

5. Wood waste collection and storage bin leaks shall be minimized at all times. All identified wood waste collection and storage bin leaks, spills and upsets of any kind shall be corrected or cleaned immediately, within 4 hours, as practicable, to correct the leak, spill or upset.

6. Wood waste collection and storage bins shall be emptied on a schedule that ensures that the cyclone-separator system does not become plugged.

7. Wood waste collection and storage bins, not including the fuel shed, shall remain enclosed to mitigate the fugitive emissions from the unloading process.

8. All ash shall be transported in a wet condition in covered containers or stored in closed containers at all times

9. Fugitive dust generated from access and on-site roads shall be minimized by application of water, dust palliative, chip-sealing, or paving.

10. Fugitive dust from storage piles, processing area, and disturbed areas shall be minimized by periodic cleanup and/or use of sprinklers, tarps, or dust palliative agents.

11. During periods of high winds, Permittee shall take immediate action to correct fugitive dust emissions from the chip processing area.

12. All necessary surfaces shall be cleaned or washed sufficiently to prevent wind-blown dust

from leaving the property boundaries.

13. All truck loading and unloading conducted at the facility shall be done in a manner that minimizes spillage, and fugitive emissions.

14. For U2, the drift rate shall not exceed 0.0005%.

15. Each container holding volatile organic waste shall be labeled with the contents identified and information noting the date when waste material was added.

16. The Permittee shall inspect all containers holding VOCs or waste, at least weekly, for leaks and for deterioration caused by corrosion or other factors.

17. Containers holding ignitable or reactive waste must be located within the property boundary at least 50 feet from the facility's property line.

18. Incompatible wastes must not be placed in the same container. The treatment, storage, and disposal of ignitable or reactive waste, and the commingling of wastes, or wastes and materials, must be conducted so it does not:
    a. Generate extreme heat, pressure, explosion, or violent reaction;
    b. Produce uncontrolled toxic mists, fumes, dusts or gases in sufficient quantities to threaten human health;
    c. Produce flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
    d. Damage the structural integrity of the device or facility containing the waste; or
    e. Through other means threaten human health or the environment.

G. Fuel Restrictions

1. The following biomass fuels shall constitute the only fuel allowed for use as fuel in U1, except during periods defined in *Condition X.D.* and to counteract upset conditions:
    a. Untreated wood pallets, crates, dunnage, untreated manufacturing and construction wood debris from urban areas;
    b. All agricultural crops or residues;
    c. Wood and wood wastes identified to follow all of the following practices;
        i. Harvested pursuant to an approved timber management plan prepared in accordance with the Z'berg-Nejedly Forest practice Act of 1973 or other locally or nationally approved plan; and
        ii. Harvested for the purpose of forest fire fuel reduction or forest stand improvement.

2. The heat input from pipeline natural gas shall not exceed 10% of the total heat input to U1 on a 12-month rolling basis.

3. The heat input to U3 shall only be PUC– quality pipeline natural gas

H. Monitoring Conditions

1. For U1, Permittee shall maintain the following equipment at all times when the combustion process is occurring
   a. Permittee shall install, calibrate, operate and quality assure a CEMS that measures CO, NO_x, and CO_2 in ppmv.
   b. Permittee shall conduct initial certification of the CEMS in accordance with *Condition X.H.2.*
   c. Permittee shall operate and maintain a COMS capable of measuring stack gas opacity
   d. Permittee shall install a stack gas volumetric flowrate monitor and steam production rate monitor.

2. The CEMS for U1 shall meet the applicable requirements of 40 CFR Part 60.13 and 40 CFR Part 60 Appendix B, and 40 CFR Part 60 Appendix F, Procedure 1.

3. Each CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute clock-hour period.

4. Data sampling, analyzing, and recording of the CEMS shall also be adequate to demonstrate compliance with emission limits during startup and shutdown.

5. The initial certification of the CEMS may either be conducted separately or as part of the initial performance test of U1. The CEMS must undergo and pass initial performance specification testing on or before the date of the initial performance test.

6. The CEMS shall be audited quarterly and tested annually to demonstrate that it meets the specifications in *Condition X.H.2.* Permittee shall perform a full stack traverse during the initial run of annual relative accuracy test auditing of the CEMS, with testing points selected according to 40 CFR Part 60 Appendix A, Method 1.

7. Permittee shall submit a CEMS performance test protocol to the EPA no later than 30 days prior to the test date to allow review of the test plan and to arrange for an observer to be present at the test. The performance test shall be conducted in accordance with the submitted protocol and any changes required by EPA.

8. For U1, opacity shall be monitored by a COMS that meets the applicable requirements of 40 CFR Part 60 Appendix B, Procedure 1.

9. The COMS shall have a span value of 100% and utilize a computer or other facility which has the capability of interpreting sampling data and producing output to demonstrate compliance with applicable standards. The span value for the continuous

measuring system for measuring opacity shall be between 60 and 80%. The span for the recording instrumentation for the opacity meter shall be 0 to 100%.

10. The operator/owner shall monitor the following combustion and control parameters for U1 on a continuous basis unless otherwise noted:
    a. combustion temperature (at the superheater tube area);
    b. temperature at air heater outlet;
    c. steam production rate;

11. Permittee shall furnish the EPA with a written report of the results of tests within 60 days of completion.

12. Permittee shall continuously monitor the ESP for transformer/rectifier (T/R set) On/Off status and Rapper On/Off status.

13. Permittee shall record hourly readings of ESP zone voltage (minimum 10 kilovolts, maximum 60 kilovolts) and amps on the operator log.

14. For U3, permittee shall install and maintain an operational non-resettable elapsed time meter to record the operating time of the emergency engine.

I. Performance Tests

1. Performance tests shall be conducted in accordance with the test methods set forth in 40 CFR Part 60.8 and 40 CFR Part 60- Appendix A, as modified below:
    a. EPA Methods 1-4, 18 and 25A for VOC emissions. Methods 18 and 25A may both be used simultaneously to quantify the annual emissions of the organic compounds listed in 40 CFR 51.100(s)(1) (using Method 18) and subtract this amount from the annual total VOC emissions (as determined from Method 25A).
    b. EPA Methods 1-4 and 6(c) for SO_2 emissions.
    c. EPA Methods 1-4 and 10 for CO emissions.
    d. EPA Methods 1-4 and 7 for NO_x emissions.
    e. EPA Methods 1-3 and 29 for Pb emissions.
    f. EPA Methods 1-4 and 5 for PM emissions.
    g. EPA Methods 1-4, 5 and 202 with a two-hour test run period for each test for PM_{10} and $PM_{2.5}$ emissions. In lieu of Method 5, the Permittee may use Other Test Method 27. In lieu of Method 202, the Permittee may use Other Test Method 28.
    h. The provisions of 40 CFR Part 60.8(f).
    i. In lieu of the specified test methods, alternative methods may be used with prior written approval from EPA.

2. For U1,
    a. Within 60 days after achieving normal operation, but not later than 120 days after the modification, Permittee shall conduct initial performance tests (as described in 40

CFR Part 60.8) for NO_x CO, PM, PM_{10}, $PM_{2.5}$, VOC, SO_2 and Pb emissions.

b. For performance test purposes, sampling ports, platforms, and access shall be provided on the emission unit exhaust system in accordance with the requirements of 40 CFR Part 60.8(e).
c. Annual performance tests of PM_{10} shall be conducted at the facility's maximum steam production rate.
d. Performance tests for NO_x and CO shall be conducted at least every five years beginning ten years after the initial performance test (within 30 days of the tenth anniversary of the initial performance test date).
e. Permittee shall submit a performance test protocol to EPA no later than 30 days prior to a performance test to allow review of the test plan and to arrange for an observer to be present at the test. The performance test shall be conducted in accordance with the submitted protocol, and any changes required by EPA.

3. For U2, the Permittee shall do the following:
   a. Perform weekly tests of the blow-down water quality using an EPA-approved method. The operator shall maintain a log that contains the date and result of each blow-down water quality test, the water circulation rate at the time of the test, and the resulting mass emission rate. This log shall be maintained onsite for a minimum of five years and shall be provided to EPA and District personnel upon request.
   b. Calculate PM, PM_{10}, and $PM_{2.5}$ emission rate using an EPA-approved calculation based on the total dissolved solids (TDS) and water circulation rate.
   c. Conduct all required cooling tower water quality tests in accordance with an EPA-approved test and emissions calculation protocol. Thirty (30) days prior to the first such test, the operator shall provide a written test and emissions calculation protocol for EPA review and approval, with a copy to the District as specified in *Condition XII*.
   d. Establish a maintenance procedure that states how often and what procedures will be used to ensure the integrity of the drift eliminators and to ensure compliance with recirculation rates. This procedure is to be kept onsite and made available to EPA and District personnel upon request. The permittee shall promptly report any deviations from this procedure.

4. For U3, the Permittee shall conduct an initial performance test (as described in 40 CFR Part 60.4244) for NO_x, CO and emissions and at least every five years beginning ten years after the initial performance test (within 30 days of the tenth anniversary of the initial performance test date).

5. Upon written request from the Permittee, and adequate justification, EPA may waive a specific annual test and/or allow for testing to be done at less than maximum operating capacity.

J. Recordkeeping and Reporting

1. Permittee shall maintain a file of all records, data, measurements, reports, and documents related to the operation of the Facility, including, but not limited to, the following: all records or reports pertaining to adjustments and/or maintenance performed on any system or device at the facility; initial performance test data for U1, documents from the fuel supplier for *Condition X.D.1.*; and all other information required by this permit recorded in a permanent form suitable for inspection.

2. Permittee shall record the efficiency of U1 daily. The heat input, as determined from the U1 efficiency and steam production rate, shall not exceed 468 MMBtu/hr on a monthly basis.

3. For U1, Permittee shall maintain the following records:
   a. The total monthly hours of operation;
   b. 3-hour averages of CO and NO_x emissions in units of lbs/MMBtu and lbs/hour dry basis. All time periods when the boiler is not in operation shall be excluded from the averages. The monthly average of CO and NO_x emissions expressed in lbs/hour shall also be included;
   c. 3-hour average calculations of PM_{10} emissions in units of lbs/MMBtu and lbs/hour dry basis using the most recent annual PM_{10} source test;
   d. notification of all periods the continuous monitors were not functioning and the reasons for the same;
   e. steam production rate averaged over a daily (24-hour) period.

4. Permittee shall maintain CEMS and COMS records that include the following:
   a. the occurrence and duration of any startup, shutdown, or malfunction, performance testing, evaluations, calibrations, checks, adjustments maintenance, duration of any periods during which a CEMS or COMS is inoperative, and corresponding emission measurements.
   b. date, place, and time of measurement or monitoring equipment maintenance activity;
   c. operating conditions at the time of measurement or monitoring equipment maintenance activity;
   d. date, place, name of company or entity that performed the measurement or monitoring equipment maintenance activity and the methods used; and
   e. results of the measurement or monitoring equipment maintenance.

5. Permittee shall maintain records and submit a written report of all excess emissions and opacity measurements to EPA and the District semi-annually, except when more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. The report is due on the 30th day following the end of each semi-annual period and shall include the following:
   a. Time intervals, data and magnitude of the excess emissions, the nature and cause (if known), corrective actions taken and preventive measures adopted;
   b. Applicable time and date of each period during which the CEMS or COMS was

inoperative (monitor down-time), except for zero and span checks, and the nature of CEMS or COMS repairs or adjustments;

c. A statement in the report of a negative declaration; that is, a statement when no excess emissions occurred or when the CEMS or COMS has not been inoperative, repaired, or adjusted;
d. Any failure to conduct any required source testing, monitoring, or other compliance activities; and
e. Any violation of limitations on operation, including but not limited to restrictions on hours of operation.

6. A period of monitor down-time shall be any unit operating clock hour in which sufficient data are not obtained by the CEMS to validate the hour for NO_x, CO, or CO_2.

7. Excess emissions shall be defined as any period in which emissions exceed the emission limits and standards set forth in *Conditions X.C.1, X.C.2, X.C.3 and X.D.5.*

8. Excess emissions indicated by the CEMS, COMS, source testing, or compliance monitoring shall be considered violations of the applicable emission limit or standard for the purpose of this permit.

9. For U1, daily records of fuel received other than natural gas shall be maintained. These records shall include a detailed description of the fuel supplier, fuel type and tons received.

10. For U3, the permittee shall maintain records of the following: hours of operation, purpose of operation, fuel usage on hourly basis and calculated PM/PM_{10} emissions based on manufacturer emissions specifications and fuel usage data.

11. Unless otherwise specified herein, all records required by this PSD Permit shall be retained for not less than five years following the date of such measurements, maintenance, reports, and/or records.

XI. ACROYNMS AND ABBREVIATIONS

ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BTU	British Thermal Unit
CAA	Clean Air Act
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CTG	Combustion Turbine Generator
CTM	Conditional Test Method
COMS	Continuous Opacity Monitoring System
CU	Cogeneration Unit
District	Shasta County Air Quality Management District
DLN	Dry Low NO_X
(d)scf	(dry) Standard Cubic Feet
EPA	Environmental Protection Agency
ESP	Electrostatic Precipitator
gpm	Gallons Per Minute
gr	Grains
HHV	Higher Heating Value
hr	Hour
lbs	Pounds
MMBtu	Million British Thermal Units
MW	Megawatt
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen Dioxide
NO_X	Oxides of Nitrogen
NSPS	New Source Performance Standards
PM	Total Particulate Matter
$PM_{2.5}$	Particulate Matter with aerodynamic diameter less than 2.5 micrometers
PM_{10}	Particulate Matter with aerodynamic diameter less than 10 micrometers
ppm	Parts Per Million
ppmvd	Parts Per Million by Volume, Dry basis
ppmv	Parts Per Million by Volume
PSD	Prevention of Significant Deterioration
RATA	Relative Accuracy Test Audit
SCR	Selective Catalytic Reduction
SO_2	Sulfur Dioxide
SO_X	Oxides of Sulfur
TDS	Total Dissolved Solids
tpy	Tons Per Year
yr	Year

XII. AGENCY NOTIFICATIONS

All correspondence as required by this Approval to Construct must be sent to:

A. Director, Air Division (Attn: AIR-5)
EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Email: R9.AEO@epa.gov
Fax: (415) 947-3579

With a copy to:

B. Air Pollution Control Officer
Shasta County Air Quality Management District
1855 Placer Street, Suite 101
Redding, CA 96001
Fax: (661) 723-3450